

**[0061]** A summarized invoice module (27) permits the selection of an arbitrary (date interval selection) number of detail invoices to be collected and billed as one. The summarized billing application also allows exclusion of one or more invoices from the selected invoices maintaining payment history.

**[0062]** The TIMS system can be deployed in many different locations. Each location may have unique requirements, however the distributed TIMS code is common to all locations. The application control table (28) permits different functionality to be implemented at each site. Obvious examples of this variability that must be accounted for are metric vs. English units of measure, currency types and sales billing methodologies. The application defaults table (29) contains user updateable default values for many of the fields common to many of the applications, such as company, office, department codes and units of measure, etc. Many of the applications are programmed to retrieve these default values upon startup.

**[0063]** Xmemo (30) is the sales and purchase memo function that passes inventory costing information between the TIMS inventory system and the SCOA mainframe. This is done in the form of an upload to the mainframe. The inventory query module (31) is called from other modules. Its function is to permit a salesperson to view current inventory and transactions, such as pending sales or forecast allocations. This module is the interface between other modules and the inventory, and is used to define the product and quantities to be allocated. Inventory reflects these quantities as committed inventory.

**[0064]** Fig. 2 shows the Inventory/Accounting Interface, which includes inventory system (32), interface (33) and accounting system (34). The interface system (33) comprises three modules,

a PO/REC module (33a), an AP module (33b), and an AR module (33c). The interface modules use inventory cost transactions to post accounting transactions.

**[0065]** The PO/REC interface module (33a) uses inventory purchase orders and receivers as the source of these transactions. This permits the accounting system to reflect potential and received liabilities. The candidate data is selected, transformed, validated and posted into accounting system structures.

**[0066]** The AP interface module (33b) takes as source those transactions that add cost after the receipt of inventory (i.e. transfers, fabrications, etc.) and after selection, transformation and validation occurs, passes this information into the appropriate accounting system tables.

**[0067]** The AR interface module (33c) takes candidate transactions (invoice and customer returns) from the inventory system (selectable by date, type or specific item), transforms, validates, and passes the information into the format/content required by the accounting system.

**[0068]** Fig. 3 shows the functioning process of the inventory/accounting system of Fig. 2. The user selects candidates from the inventory system (35) by means of the display such as candidates by source type, views candidate list, and excludes as required any other type of information. Thereafter, the system processes the information into the accounting interface (36) where validation and reporting functions are provided. Upon acceptance of data validity, the records are posted into the appropriate accounting structure (37). Mappings and data lookup occur per lookup to mapping tables. Accounting requires that costs be accumulated and posted to specific accounts as are needed to establish profitability for the various market

segments. The module permits accounting to process selectively these major categories for posting from the TIMS to the accounting system.

[0069] Fig. 4 shows the TIMS demand-based forecast method. Initially, a customer drilling forecast (41) is generated based on several requirements including (a) time and place requirements and (b) materials specifications. Thereafter, the customer drilling forecast is converted into a materials requirements (42), and allocating the inventory (43) fulfills the order. Prior to fulfilling the order, an inventory query (44) is made wherein the availability of the materials is checked based on location, on hand, on order, or on commitment. If after the inventory query is made and it is determined that the order cannot be fulfilled from the existing inventory (45), alternative measures are taken. For example, if the order cannot be fulfilled, an unfulfilled needs process (46) is activated, wherein the missing materials are purchased (47). After purchasing and receiving (48) the materials, they are added to the inventory (45) and the order is fulfilled. A reminder tool (49) notifies the user when materials are ordered and received. Alternatively, if the materials are not purchased, the materials can be fabricated (50), and added to inventory (45). Once the materials have been added to inventory, the order is filled and the customer forecast (51) is completed. An alternative to the ordering of new material may be the selective reallocation of materials from one pending order to another. Then at a later date, should it appear likely that additional materials are required, then those materials are placed on order to replace the materials just reallocated. Thereafter, the information obtained from the forecast can be used for other processes.